

## **ABSTRACT**

The invention described herein is a surgical cement preparation system designed for the rapid, clean, safe, accurate and thorough handling and combining of cement ingredients. The invention is particularly useful in the preparation of surgical cements such as opacified polymethylmethacrylate to ensure their thorough mixture and presentation in advance of the cured or hardened state. The invention provides a surgical cement preparation system for combining a liquid ingredient together with at least one solid powder ingredient comprising a needle and syringe assembly and a mixing vial structured to optimize their relative functions and cooperatively interact with other components. The invention further provides a process for preparing surgical cement comprising the system of the invention, as well as a kit comprising the system of the invention in combination with additional components.